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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,837

07/21/2006

Naoto Miura

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EXAMINER

CHAWAN, SHEELA C

ART UNIT

PAPER NUMBER

2624

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,837	<b>Applicant(s)</b> MIURA ET AL.	
	<b>Examiner</b> SHEELA C. CHAWAN	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/27/08, 11/29/07, 8/22/07, 7/21/08</u> .                     | 6) <input type="checkbox"/> Other: _____                          |



***DETAILED ACTION***

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 8/27/08, 11/29/07, 8/22/07, 7/21/08, the information disclosure statement is being considered by the examiner.

***Drawings***

3. The Examiner has approved drawings filed on 7/21/06.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 6 - 12, are rejected under 35 U.S.C. 102(e) as being anticipated by Endoh et al., (US. 7,359,531 B2).

As to claim 1, Endoh discloses a vein authentication device comprising:  
an interface on which a part of a living body whose image is to be  
picked up is placed (note, an interface is (column 7, lines 50-52, fig 1, element 1C is

Art Unit: 2624

presented) ;

one or more light sources for emitting infrared light (column 8, lines 6-8, an infrared light emitting source is in the element 1a, fig 1);

an image pickup unit for picking up a blood vessel image of the part of the living body using infrared light emitted from the light sources ( photographing unit (image pickup unit), fig 1, element 1b, column 7, line 50);

an image computing unit for processing the blood vessel image picked up by the image pickup unit (column 8, lines 8-12, extracts the image from the photographing unit); and

a light shielding unit for shielding infrared light emitted from the light sources and preventing the infrared light from traveling in an image pickup direction of the image pickup unit( note, light shielding or diverting the light path is done in the mouse to direct it towards the object to be photographed, column 7, lines 66-67, column 8, lines 1-3),

wherein the interface has an opening opened in the image pickup direction of the image pickup unit (the imaging area is transparent to allow near IR light to reach the photographing unit (column 8, lines 14- 20), and

wherein the light sources irradiates the part of the living body with infrared light from an image pickup side of the part of the living body (column 8, lines 6-8 the IR light source irradiates the part of the body surface to be imaged).

As to claim 6, Endoh discloses the vein authentication device according to claim 1, wherein the interface allows the part of the living body to move thereon (note, the part

Art Unit: 2624

of the body to be imaged is on the imaging device(column 8, lines 6-11) also see fig 2, box 1, element 1a and 1b);

wherein the image pickup unit picks up plural vein images of the part of the living body at different sites(column 9, lines 10-12 image pickup unit (photographing unit) photographs blood vessels from different areas of the hand (palm) ; and

the image computing unit composites the plural vein images picked up by the image pickup unit (column 11, lines 24- 28 plurality of images are obtained for identification).

As to claim 7, Endoh discloses the vein authentication device according to claim 6, further comprising a movement amount measuring unit for measuring a movement amount of the part of the living body (fig 1, element 1d), and

wherein the image computing unit composites the plural vein images picked up by the image pickup unit with reference to the movement amount measured by the movement amount measuring unit (note, processing unit( fig 1, element 2b).

As to claim 8, Endoh discloses the vein authentication device according to claim 1, further comprising a light amount adjusting unit for adjusting a light amount of the light sources.

As to claim 9, Endoh discloses the vein authentication device according to claim 8, wherein the image pickup unit picks up plural vein images of the part of the living body at different light amounts adjusted by the light amount adjusting unit ( the image

Art Unit: 2624

pickup unit (photographic unit, column 9, lines 10-12); and

the image computing unit composites the plural images picked up by the image pickup unit (column 9, lines 37- 40).

As to claim 10, Endoh discloses the vein authentication device according to claim 1, wherein the interface is formed integrally with the light shielding unit (column 9, lines 15-18).

Regarding claim 11, argument analogous those presented for claim 1 are applicable to claim 11. Regarding claim 11 Endoh further teaches wherein the interface has an opening opened in an image pickup direction of the image pickup unit (fig 6, element 51a is the opening or window for image pickup (column 9, lines 62- 65) ,

wherein the light sources is placed laterally to the opening, wherein the light sources emits infrared light having an optical axis in the image pickup direction to irradiate the part of the living body with infrared light from an image pickup side of the part of the living body (fig 6, element 51a is the opening or window for image pickup (column 9, lines 62- 65, 66-67, column 10, lines 1-3), and

wherein the light shielding unit is provided between the opening and the light sources, and to more than half of an upper portion of the light sources on the opening side (note, the light shield (filter) is (fig 4, element 50).

Regarding claim 12, argument analogous those presented for claim 1 and 11 are applicable to claim 12. Regarding claim 12 Endoh further teaches wherein the light sources is placed laterally to the opening( fig 6, element 1a) is placed within the body of the mouse), wherein the light sources emits infrared light having an optical axis that is

Art Unit: 2624

tilted in a direction opposite to the opening to irradiate the part of the living body with infrared light from an image pickup side of the part of the living body (fig 6, element 1a, infrared LED are located opposite to the body part placement area or element 51a) , and

wherein the light shielding unit is provided between the opening and the light sources, and to an upper portion of the light sources on the opening side (fig 6, element 1a, infrared LED are located opposite to the body part placement area or element 51a, light shield is between the opening (window of the image pickup device) and the light sources).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to



Art Unit: 2624

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 -5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Endoh et al., (US. 7,359,531 B2), as applied to claims 1, 6 -12 and further in view of Choshi et al., (US. 7,327,861 B2) .

Endoh discloses a processor with a personal verification function and an operating device, which can carry out personal authentication and personal identification at any time, and operate within a saved space without placing a burden on the user. Endoh is silent about wherein the part of the living body is a finger.

Choshi discloses organism authenticating apparatus where position of a hand or a finger of a hand (column 6, lines 65-66 and fig 10a element B of part 14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Endoh to include a hand or a finger of a hand. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Endoh by the teaching of Choshi in order to realizes high authentication accuracy by a simple apparatus structure (as suggested by Choshi at column 1, lines 25- 28) .

As to claim 3, Choshi discloses the vein authentication device according to claim 2, wherein the plural light sources line up in a direction substantially perpendicular to a longitudinal direction of a finger put on the interface (fig 10 B, shows the position of IR LED's and the finger).

As to claim 4, Choshi discloses the vein authentication device according to claim

Art Unit: 2624

2, wherein the interface is provided with plural pits extending in a longitudinal direction of a finger put on the interface (note, the interface receiving the finger for imagine the blood vessels has a receiving pit (column 6, line 67) window 75 forms a dent that is covered by the finger (fig 10 b).

Regarding claim 5, it is interpreted and thus rejected for the same reasons as applied above in the rejection of claim 4.

***Other prior art cited***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen (US. 7,327,561 B2) discloses electrical device for adjusting the angle between a top module and a bottom module.

Okamura et al., (US. 2006/0023919 A1) discloses guidance screen control method of biometrics authentication device, biometrics authentication device, and program for same.

Carta et al., (US. 7,376,839 B2) discloses smart card access control system.

Katsumata et al., (US. 7,273,170 B2) discloses verification system and program check method for verification system.

Blume (US. 7,181,048) discloses biometric capture adapter for digital imaging devices.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272- 7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sheela C Chawan/

4/23/09

Primary Examiner, Art Unit 2624

Application/Control Number: 10/586,837  
Art Unit: 2624

Page 10

Application/Control Number: 10/586,837  
Art Unit: 2624

Page 11

Application/Control Number: 10/586,837  
Art Unit: 2624

Page 12